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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)		
	09/831,783	MCKENZIE ET AL.		
Office Action Summary	Examiner	Art Unit		
	Laura C. Guidotti	1744		
- The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence address		
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim rill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONEI	I. lely filed the mailing date of this communication. D (35 U.S.C. § 133).		
Status				
1) ☐ Responsive to communication(s) filed on <u>03 Oct</u> 2a) ☐ This action is FINAL . 2b) ☐ This 3) ☐ Since this application is in condition for alloward closed in accordance with the practice under E	action is non-final. nce except for formal matters, pro			
Disposition of Claims		,		
4) ☐ Claim(s) 33-39 and 41-58 is/are pending in the 4a) Of the above claim(s) is/are withdraw 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 33-39 and 41-58 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or Application Papers 9) ☐ The specification is objected to by the Examiner 10) ☐ The drawing(s) filed on 29 September 2003 is/a Applicant may not request that any objection to the or	vn from consideration. relection requirement. r. ure: a)⊠ accepted or b)□ object			
Replacement drawing sheet(s) including the correcti	, , , , ,			
Priority under 35 U.S.C. § 119				
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 				
Attachment(s)	»□·····			
 Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal Pa			

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 33-35 and 39 are rejected under 35 U.S.C. 103(a) as obvious over Sharp, USPN 5,297,512.

Sharp discloses a vibrating and ultrasonic sound emitting grooming device that comprises a housing (18), a gripping means (Figure 1 (19)), a cleaning head (Figure 1) that is adapted to be removably mounted to the housing (as it is attached by a "friction" fit", Column 2 Lines 35-41) and capable of being interchangeable (as it is attached by a "friction fit" so that one is capable of removing one head and reattaching another by any means, Column 2 Lines 35-41; see also MPEP 2144.04 (V) C), a transducer means mounted in the housing for oscillating (Figure 1 (40)), and a power supply means which is mounted in the housing (Figure 1 (46)). The gripping means is at a proximal end while the cleaning head is at a distal end (Figure 1). The cleaning head is in the form of bristles (Figure 1(28)). The transducer means has a frequency if 30 kHz (Column 3 Line 9). The average oscillating frequency is 30 kHz (Column 3 Line 9), which falls into the range of 1000 Hz to 100 kHz. Sharp does not disclose having a cleaning head surface area greater than 6.25 cm², however Figure 1 indicates a finger defining a scale for the size of the device indicating that the area is greater than about 6.25 cm² and additionally, Sharp gives a dimension for each tine of being 3/4" (Column 2 Lines 45-49).

It would have been obvious to one of ordinary skill in the art to construct a cleaning head for a sonic surface cleaner that is used for a cleaning a pet's coat to have a cleaning head surface area greater than 6.25 cm² because it would be desirable to have a larger cleaning surface area to reduce the time it takes to clean an area, to reduce the human effort in cleaning a large surface, and because it is most efficient for cleaning a large area. Additionally, "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges

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by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

2. Claims 33-35, 39, and 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bock, USPN 5,369,831 (herein '831) in view of Dolinsky, USPN 4,288,883.

'831 discloses a therapeutic ultrasonic toothbrush that comprises a housing (22), a gripping means (Figure 1 (gripping portion of 22)), a cleaning head (Figures 1-3 (32)) that is adapted to be removably mounted to the housing and is capable of being interchangeable (Figure 2; Column 3 Line 6), a transducer means mounted in the housing for oscillating (Figure 1 (28); Column 3 Lines 10-18), and a power supply means which is mounted in the housing (Figure 1 (24)). The gripping means is at a proximal end while the cleaning head is at a distal end (Figures 1-3). The transducer means has an average ultrasonic oscillating frequency of from about 1000 Hz to about 100 kHz, (Title states that the device is "ultrasonic", Column 2 Lines 66-68, wherein "ultrasonic" is defined as "designating or a frequency of mechanical vibrations above the range audible to the human ear, i.e., above 20,000 vibrations per second" according to The Webster's New World Dictionary of American English, Third College Edition Copyright © 1988 by Simon & Schuster, Inc., therefore wherein 20,000 vibrations per second is converted into Hertz, it is 20,000 Hz or 20 kHz). The cleaning head is in the form of bristles (Figures 1-3 (34)). The device is adapted to function while at least partially immersed in an aqueous environment since it is in the form of a toothbrush and is used in the oral cavity (Column 5 Lines 59-64). There is a first and second housings.

with the transducer means in the second housing, the second housing being more towards the distal end, and the power supply means in its own housing towards the proximal end. '831 does not disclose having a cleaning head surface area greater than about 6.25 cm².

Dolinsky discloses a toothbrush head having a surface area greater than *about* 6.25 cm² (Column 1 Lines 63-64; particularly 6.6 cm²) for effectively cleaning teeth and gums (Column 1 Lines 20-24).

It would have been obvious for one of ordinary skill in the art to modify the cleaning head of '831 to have a surface area great than 6.25 cm², as Dolinsky teaches, so that the brush head effectively cleans a greater area of an oral cavity at once, including gums. Also, Applicant has not disclosed that having a cleaning head surface area greater than 6.25 cm² provides an advantage, is used for a particular purpose, or solves a stated problem. Also, MPEP 2144.04 IV A states "In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

3. Claims 33-35, 39, and 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bock, USPN 5,546,624 (herein '624) in view of Dolinsky, USPN 4,288,883.

'624 discloses a therapeutic ultrasonic toothbrush that comprises a housing (Figure 1), a gripping means (Figure 1 (22)), a cleaning head (Figures 1-3 (32)) that is adapted to be removably mounted to the housing and is capable of being interchangeable (Figure 2; Column 3 Line 6), a transducer means mounted in the housing for oscillating (Figure 1 (28); Column 3 Lines 10-18), and a power supply means which is mounted in the housing (Figure 1 (24)). The frequency is 1.6 MHz (about 100 kHz, see Column 8 Lines 43-46). Further, the transducer means has an average oscillating frequency of from about 1000 Hz to about 100 kHz, since the toothbrush is "ultrasonic" (see Title) and ultrasonic refers to subsonic, sonic, or ultrasonic (Column 3 Lines 51-55; wherein "ultrasonic" is defined as "designating or a frequency of mechanical vibrations above the range audible to the human ear, i.e., above 20,000 vibrations per second" according to The Webster's New World Dictionary of American English, Third College Edition Copyright © 1988 by Simon & Schuster, Inc. wherein 20,000 vibrations per second converted into Hertz, is 20,000 Hz or 20 kHz). The gripping means is at a proximal end while the cleaning head is at a distal end (Figures 1-3). The cleaning head is in the form of bristles (Figures 1-3 (34)). The device is adapted to function while at least partially immersed in an aqueous environment since it is in the form of a toothbrush and is used in the oral cavity (Column 5 Lines 59-64). There is a first and second housings, with the transducer means in the

second housing, the second housing being more towards the distal end, and the power supply means in its own housing towards the proximal end. '624 does not disclose having a cleaning head surface area greater than *about* 6.25 cm².

Dolinsky discloses a toothbrush head having a surface area greater than *about* 6.25 cm² (Column 1 Lines 63-64; particularly 6.6 cm²) for effectively cleaning teeth and gums (Column 1 Lines 20-24).

It would have been obvious for one of ordinary skill in the art to modify the cleaning head of '624 to have a surface area great than 6.25 cm², as Dolinsky teaches, so that the brush head effectively cleans a greater area of an oral cavity at once, including gums. Also, Applicant has not disclosed that having a cleaning head surface area greater than 6.25 cm² provides an advantage, is used for a particular purpose, or solves a stated problem. Also, MPEP 2144.04 IV A states "In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

4. Claims 33-39, 41-52, and 55-56 are rejected under 35 U.S.C. 103(a) as obvious over Sawyer, USPN 3,357,033 in view of Bock ('831), USPN 5,369,831.

Sawyer discloses a sonic surface cleaner that comprises a housing (Figures 1-3), a gripping means (Figure 1 (12)), a cleaning head (Figures 1-3 (30)) that is adapted to be removably mounted to the housing (Column 2 Lines 52-57 and Column 3 Lines 33-41) wherein the cleaning head is interchangeable (Column 2 Lines 52-57 and Column 3 Lines 33-41), a transducer means mounted in the housing for oscillating (Column 4 Lines 17-22 disclose that the energy generated is "transformed" into sound waves and releases that energy at the surface as sonic Column 4 Lines 22-36) that is of a frequency in the lower sonic range and has a cleaning effect "analogous to the implosion effect produced by ultrasonic wave energy" (Column 4 Lines 69-72), and a power supply means (from wires (55) and (56) that lead to a cap (60), Column 3 Lines 10-18, and by Figure 1 appear to connect to a cord that would go to an outlet.) The gripping means is at a proximal end while the cleaning head is at a distal end (Figure 1). The device further comprises at least one solution storage means (Figure 1 (72) that contains a cleaning composition for cleaning, and a dispensing means (Figure 1 (71)) mounted in the housing for supplying the cleaning composition (Column 3 Lines 22-32). The cleaning head may be a sponge (Figure 3) so that the cleaning liquid is supplied to a surface that is coterminous (Figure 2) with the head in that the absorbent sponge portions disperse the liquid. The "second" housing is the housing labeled (11) in Figures 1-3 wherein the "first" housing is the liquid supply (Figure 1 (72)). Further, the device of Sawyer may contain a surfactant in the reservoir (specifically a detergent, Column 5 Lines 42-43). Sawyer also discloses a method for removing soil from a hard surface that contacts the soil with a liquid and cleaning head and imparting ultrasonic

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energy to it (Column 4 Line 73 to Column 5 Line 18 states that a cleaning composition or detergent is put into contact with a soil, then loosening the soil, and then rinsing the amount with water.) Sawyer does not disclose having a cleaning head surface area greater than *about* 6.25 cm² (although it appears in Figure 1 that the surface head is of at least a certain size to efficiently clean a floor surface) or having a power output of at least 0.02 watts/cm³. Sawyer does not disclose that the cleaning head oscillates at a frequency from about 1000 Hz to about 100 kHz.

'831 discloses all elements above including the teaching of using a transducer to emit ultrasonic waves in order to clean debris from a tooth surface (Column 2 Lines 10-36; (Column 2 Lines 66-68, wherein "ultrasonic" is defined as "designating or a frequency of mechanical vibrations above the range audible to the human ear, i.e., above 20,000 vibrations per second" according to *The Webster's New World Dictionary of American English, Third College Edition Copyright* © 1988 by Simon & Schuster, Inc. wherein 20,000 vibrations per second converted into Hertz, is 20,000 Hz or 20 kHz).

It would have been obvious for one of ordinary skill in the art to have the transducer of Sawyer modified to create an ultrasonic oscillating frequency of 20 kHz, as '831 teaches, in order to have sufficient cleaning energy to remove debris from a surface and it would have been obvious to one of ordinary skill in the art to construct a cleaning head for a sonic surface cleaner that is used for a floor to have a cleaning head surface area greater than 6.25 cm² or having a power output of at least 0.02 watts/cm³ because it would be desirable to have a larger cleaning surface area to reduce the time it takes to clean an area, to reduce the human effort in cleaning a large

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surface, and because it is most efficient for cleaning a large area. Additionally, "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Furthermore, MPEP 2144.04 IV A states "In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device."

5. Claims 53, 54, 57, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawyer, USPN 3,357,033 in view of Bock ('831), USPN 5,369,831.

Sawyer and '831 disclose all elements regarding the device as stated above however do not disclose instructions for using the product.

It would have been obvious for one of ordinary skill in the art to provide operating instructions, as it is well known in marketing and business to provide instructions for use of a product to protect the buyer and user.

Applicants Arguments

- 6. In the response filed 03 October 2005, the Applicant contends that:
- A. There is no suggestion in Sharp either expressly or implied that the cleaning head of Sharp is interchangeable. Just because the housing is secured by a friction fit does not mean that the cleaning head is interchangeable.

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B. It is not clear that a finger touching the housing of the apparatus (of Sharp) equates to a cleaning head greater than about 6.25cm².

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- C. Bock '831 does not teach or state that the transducer means has an average oscillating frequency from about 1000 Hz to about 100 kHz.
- D. Bock '624 does not teach or state that the transducer means has an average oscillating frequency from about 1000 Hz to about 100 kHz and '624 states that a "useful frequency is 1.6 MHz."
- E. Young is disqualified as a reference in accordance with 35 USC 103(c). "Young and the instant invention were, at the time the invention was made, subject to an obligation of assignment to the same person."
 - F. The cleaning tool taught by Sawyer does not utilize ultrasonic energy.
- G. There is no teaching or suggestion in Sawyer to utilize a cleaning head surface greater than 6.25cm² or to have a power output of at least 0.02 watts/cm³. It is impermissible for the Examiner to use Applicants claimed invention to reconstruct prior art in hindsight.
- H. Sawyer does not disclose instructions for using the product, the claimed frequency range, or a surface head greater than about 6.25cm².

Response to Arguments

- 7. Applicant's arguments A-D and F-H filed 03 October 2005 have been fully considered but they are not persuasive.
- A. The cleaning head of Sharp is removably mounted to the housing and the head is <u>capable of</u> being interchangeable. In Column 2 Lines 35-41, it is stated that the

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head and housing are attached by a friction fit and it is shown in the Figures as to how they are attached. See also MPEP 2144.04 (V) C.

- B. Sharp not only includes a finger that illustrates somewhat of a scale, Sharp also discloses that the tines are ¾" in length (Column 2 Lines 45-49, Figure 1) which also aids in illustrating the true size of the surface of the cleaning head. Although Sharp does not explicitly state a dimension of the surface, by the scaling given it is likely that the surface is greater than about 6.25cm². Furthermore, It would have been obvious to one of ordinary skill in the art to construct a cleaning head for a sonic surface cleaner that is used for a cleaning a pet's coat to have a cleaning head surface area greater than 6.25 cm² because it would be desirable to have a larger cleaning surface area to reduce the time it takes to clean an area, to reduce the human effort in cleaning a large surface, and because it is most efficient for cleaning a large area.
- C. Bock '831 does not explicitly state a frequency, however the title and specification clearly state that Bock '831 operates at an ultrasonic range. As stated above, "ultrasonic" is defined as "designating or a frequency of mechanical vibrations above the range audible to the human ear, i.e., above 20,000 vibrations per second" according to *The Webster's New World Dictionary of American English, Third College Edition Copyright* © 1988 by Simon & Schuster, Inc. Therefore if "ultrasonic" is considered to be above 20,000 vibrations per second is converted into Hertz, the frequency at which Bock '831 operates is at least 20,000 Hz or 20 kHz, which falls in the range of 1000 Hz to 100 kHz.

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D. Bock '624 states in the title and specification that Bock '624 operates at an ultrasonic range. As stated above, "ultrasonic" is defined as "designating or a frequency of mechanical vibrations above the range audible to the human ear, i.e., above 20,000 vibrations per second" according to *The Webster's New World Dictionary of American English, Third College Edition Copyright* © 1988 by Simon & Schuster, Inc. Therefore if "ultrasonic" is considered to be above 20,000 vibrations per second is converted into Hertz, the frequency at which Bock '831 operates is at least 20,000 Hz or 20 kHz. Bock '624 does state that a "useful frequency is 1.6 MHz", however an ultrasonic toothbrush as '624 discloses is capable of operating in the ultrasonic range which is found in a frequency of 1000 Hz to 100 kHz.

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- F. As mentioned above, it would have been obvious for one of ordinary skill in the art to have the transducer of Sawyer modified to create an ultrasonic oscillating frequency of 20 kHz, as '831 teaches, in order to have sufficient cleaning energy to remove debris from a surface. The device of Sawyer includes a transducer means mounted in the housing for transforming energy into sound waves and releasing that energy at the surface as sonic energy in a frequency in the lower sonic range and has a cleaning effect "analogous to the implosion effect produced by ultrasonic wave energy" (Column 4 Lines 17-36, 69-72).
- G. In response to applicant's arguments that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was

within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). See also above rejection.

- H. It would have been obvious for one of ordinary skill in the art to provide operating instructions to nearly any device, as it is well known in marketing and business to provide instructions for use of a product to protect the buyer and user.
- 8. Applicant's argument E, see above, filed 03 October 2005, with respect to Young have been fully considered and are persuasive. The rejection made in view of Young has been withdrawn.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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LCG

29 November 2005

RICHARD CRISPINO SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 1700